

ATTACHMENT 8

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

CISCO SYSTEMS, INC.,)
)
Plaintiff,)
) Case No.
vs.) 5:14-cv-05344-BLF (PSG)
)
ARISTA NETWORKS, INC.,)
)
Defendant.)
_____)

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VIDEOTAPED DEPOSITION OF KIRK LOUGHEED
Palo Alto, California
Friday, November 20, 2015
Volume I

Reported by:
CARLA SOARES
CSR No. 5908
Job No. 2187110
Pages 1 - 189

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<p>1 UNITED STATES DISTRICT COURT 2 NORTHERN DISTRICT OF CALIFORNIA 3 SAN JOSE DIVISION 4 5 CISCO SYSTEMS, INC.,) 6) 7 Plaintiff,) 8) Case No. 9 vs.) 5:14-cv-05344-BLF (PSG) 10) 11 ARISTA NETWORKS, INC.,) 12) 13 Defendant.) 14 _____) 15 16 17 18 19 20 21 22 23 24 25</p> <p>VIDEOTAPED DEPOSITION OF KIRK LOUGHEED, Volume I, taken on behalf of Defendant, at 650 Page Mill Road, Palo Alto, California, beginning at 9:19 a.m., and ending at 6:15 p.m., on Friday, November 20, 2015, before CARLA SOARES, Certified Shorthand Reporter No. 5908.</p>	<p>1 APPEARANCES (Continued): 2 3 For the Defendant: 4 KEKER & VAN NEST LLP 5 BY: BRIAN L. FERRALL, Attorney at Law 6 BY: RYAN WONG, Attorney at Law 7 633 Battery Street 8 San Francisco, California 94111 9 415.391.5400 10 bferrall@kvn.com 11 rwong@kvn.com 12 13 ALSO PRESENT: Sean Grant, Video Operator 14 --o0o-- 15 16 17 18 19 20 21 22 23 24 25</p>
Page 2	Page 4
<p>1 APPEARANCES: 2 3 For the Plaintiff and the Witness: 4 QUINN EMANUEL URQUHART & SULLIVAN, LLP 5 BY: JOHN (JAY) NEUKOM, Attorney at Law 6 50 California Street, 22nd Floor 7 San Francisco, California 94111 8 415.875.6341 9 johnneukom@quinnemanuel.com 10 and 11 KIRKLAND & ELLIS LLP 12 BY: JOSHUA L. SIMMONS, Attorney at Law 13 601 Lexington Avenue 14 New York, New York 10022 15 212-446-4989 16 joshua.simmons@kirkland.com 17 18 19 20 21 22 23 24 25</p>	<p>1 INDEX 2 WITNESS 3 KIRK LOUGHEED EXAMINATION Volume I 4 5 BY MR. FERRALL 10 6 7 EXHIBITS 8 NUMBER DESCRIPTION PAGE 9 Exhibit 29 Document headed "Internet 73 Protocol," 10 Bates ARISTANDCA0031553 - 1601 11 12 13 Exhibit 30 Document headed "DoD Internet 73 Host Table Specification" 14 15 16 Exhibit 31 Document headed "An Ethernet 73 Address Resolution Protocol or 17 Converting Network Protocol 18 Addresses to 48.bit Ethernet 19 Address for Transmission on 20 Ethernet Hardware," 21 Bates ARISTANDCA0003130 - 1639 22 23 24 25</p>
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1	EXHIBITS		1	EXHIBITS	
2	NUMBER	DESCRIPTION	2	NUMBER	DESCRIPTION
3	Exhibit 32	Document headed "Address	3	Exhibit 43	Document entitled "DECbrouter 90
4		Resolution Protocol (ARP) module	4		Products," Bates CSI-ANI-00081683 -
5		for the Yeager gateway"	5		1683.000344
6			6		
7	Exhibit 33	Email string, top email to Kirk	7		--o0o--
8		Lougheed and Paula Labloner from	8		
9		Mike Sanchez, dated 11-17-14,	9		
10		Bates CSI-CLI-01326834 - 6837	10		
11			11		
12	Exhibit 34	Email string, top email to Phillip	12		
13		Remaker from Kirk Lougheed, dated	13		
14		3-30-10, Bates CSI-CLI-01317865 -	14		
15		7866	15		
16			16		
17	Exhibit 35	Email string, top email to Joe	17		
18		Hielscher from Kirk Lougheed,	18		
19		dated 7-23-08,	19		
20		Bates CSI-CLI-01134849 - 4850	20		
21			21		
22	Exhibit 36	Document entitled "Stanford	22		
23		Ethertip/Gateway User and	23		
24		Configuration Guide,"	24		
25		Bates CSI-CLI-01315523 - 5568	25		
		Page 6			Page 8

1	EXHIBITS		1	Palo Alto, California		08:37:04
2	NUMBER	DESCRIPTION	2	Friday, November 20, 2015		
3	Exhibit 37	Document entitled "cisco Systems	3	9:19 a.m.		
4		AGS User Manual,"	4			
5		Bates CSI-CLI-00358166 - 8223	5	P R O C E E D I N G S		08:37:10
6			6	THE VIDEO OPERATOR: Good morning. We're		
7	Exhibit 38	Email string, top email to Phillip	7	on the record. The time is 9:19 a.m., and the date		
8		Remaker from Kirk Lougheed, dated	8	is November 20th, 2015. This begins the videotaped		
9		12-11-08, Bates CSI-ANI-00043306 -	9	deposition of Kirk Lougheed.		
10		3306.000001	10	My name is Sean Grant, here with our court	09:19:25	
11			11	reporter, Carla Soares. We're here from Veritext		
12	Exhibit 39	Document entitled "Cisco's	12	Legal Solutions at the request of counsel for		
13		Response to Arista's Interrogatory	13	defendant.		
14		No. 16 Amended Exhibit D1 (IOS	14	This deposition is being held at Wilson		
15		Release 11.0)"	15	Sonsini in Palo Alto, California. The caption of	09:19:34	
16			16	this case is Cisco Systems, Inc., versus Arista		
17	Exhibit 40	Email to Craig Fox from Kirk	17	Networks, Inc., Case No. 5:14-CV-05344-BLF.		
18		Lougheed, dated 3-6-96,	18	Please note that audio- and		
19		Bates CSI-CLI-00746398	19	video-recording will take place unless all parties		
20			20	have agreed to go off the record. Microphones are	09:19:54	
21	Exhibit 41	Document described as source	21	sensitive and may pick up whispers, private		
22		code file	22	conversations, or cellular interference.		
23			23	At this time, will counsel please identify		
24	Exhibit 42	Document described as code	24	themselves and state whom they represent.		
25			25	MR. FERRALL: Brian Ferrall of Keker &		09:20:06
		Page 7			Page 9	

15 (Pages 54 - 57)

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1 exhibit. 14:20:06	1 Q Did Cisco use the word "mode" in 14:25:27
2 (Exhibit 37 was marked for identification	2 describing its functionality of its software?
3 and is attached hereto.)	3 A We had -- there would be -- the phrase
4 BY MR. FERRALL:	4 "configuration mode" was certainly being used at
5 Q We've marked as Exhibit 37 a document 14:20:18	5 this time. 14:25:46
6 entitled "cisco Systems AGS User Manual System	6 Q Okay. And how did -- how did
7 Version 6.0." It bears control numbers	7 "configuration mode" differ from any other mode of
8 CSI-CLI-00358166 to 222.	8 operation?
9 Do you recognize Exhibit 37?	9 A It allowed you to type in command
10 A I do. 14:20:38	10 expressions that affected the configuration of the 14:26:04
11 Q Did you help prepare it?	11 system.
12 A I did.	12 Q And if you weren't in configuration mode,
13 Q And this is -- this is the manual that	13 how would you describe whatever mode you were in?
14 accompanied Version 6 of Cisco's software release;	14 A You were -- at this time you would have
15 is that correct? 14:20:58	15 said you are at the EXEC. 14:26:32
16 A Correct.	16 Q What does "EXEC" mean?
17 Q Do you recall who else would have helped	17 A It was the term that I chose to refer to
18 you prepare Exhibit 37?	18 the -- all the stuff that wasn't the configuration
19 A I believe I was the sole author.	19 mode.
20 Q Who -- strike that. 14:22:42	20 Q Give me an example of what that stuff is 14:27:08
21 IOS has different modes, correct?	21 or was.
22 MR. NEUKOM: Objection. Vague, compound.	22 A The commands for connecting to other
23 THE WITNESS: Yes.	23 computers on the network, the class of command
24 BY MR. FERRALL:	24 expressions that we call the "show" commands.
25 Q In the current version of IOS, how many 14:23:18	25 Basically the set of commands that did not 14:27:48
Page 106	Page 108
1 different modes are there? 14:23:20	1 reveal -- basically mostly status commands and ones 14:27:53
2 A A lot.	2 for handling connections over the network to other
3 Q Do you know how many?	3 hosts, sort of a subset of the -- of the terminal
4 A No, not at present.	4 server commands.
5 Q More than five? 14:23:44	5 Q And you said you chose the term "EXEC," 14:28:26
6 A Yes.	6 that's E-X-E-C; is that right?
7 Q More than ten?	7 A Yes.
8 A Probably.	8 Q You chose that term, yes?
9 Q Were there different modes in the	9 A Yes.
10 original -- actually, strike that. 14:24:04	10 Q How did you come up with that term? 14:28:39
11 Let me ask terminology.	11 A Well, I had a number of possible ways of
12 What did you call the original Cisco	12 describing it. I could have used "shell" after
13 software before it became known as IOS?	13 the -- modeling it along the UNIX way of -- UNIX
14 A The gateway software. The router	14 equivalent.
15 software. The terminal server software. The AGS 14:24:25	15 From -- I decided EXEC in sort of -- you 14:29:15
16 software. There was no branding.	16 know, inspired by the TOPS-20 command processor.
17 Q This Exhibit 37 refers to "AGS User	17 You know, calling it the command processor would
18 Manual."	18 have been another possibility.
19 What does AGS stand for?	19 There was a number of possibilities that I
20 A Advanced gateway server. 14:24:45	20 could have called it, what I could have called that 14:29:38
21 Q Okay. At the time of Version 6 of the	21 particular part of the software, and I ended up
22 Cisco software, how many different modes were there,	22 choosing EXEC.
23 do you know?	23 Q Now, were you responsible for determining
24 A So I don't understand how you're using the	24 the prompt symbol on the interface?
25 word "mode." 14:25:21	25 I'm sorry. Let me be clear. 14:30:26
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<p>1 I'm talking about on the interface line, 14:30:28</p> <p>2 there are symbols that precede the input point, such</p> <p>3 as a hash sign, for example, right?</p> <p>4 A So for -- I was responsible for choosing</p> <p>5 the prompts for the command line interface, for the 14:30:45</p> <p>6 CLI.</p> <p>7 Q Okay. And tell me what those prompts are,</p> <p>8 the various prompts that the Cisco CLI uses.</p> <p>9 A There are many right now. But at the time</p> <p>10 there was the -- the unprivileged EXEC commands, and 14:31:09</p> <p>11 that was the host name of the -- of the router or --</p> <p>12 of the router, followed by a close angle bracket.</p> <p>13 There was a privileged mode, and it</p> <p>14 changed that prompt to a hash mark.</p> <p>15 And in the initial implementation of 14:31:55</p> <p>16 configuration mode, there was no prompt.</p> <p>17 Q Okay. How did you choose the hash prompt</p> <p>18 for the privileged mode?</p> <p>19 A It was visually large and different than</p> <p>20 the -- different -- just different than the 14:32:25</p> <p>21 unprivileged EXEC prompt.</p> <p>22 Q Okay. How did you use the unprivileged</p> <p>23 close angle bracket prompt?</p> <p>24 A I don't understand your question.</p> <p>25 Q Did you choose to use the close angle 14:32:59</p> <p style="text-align: right;">Page 110</p>	<p>1 Q And you're not aware of any use of a hash 14:35:22</p> <p>2 sign as a prompt?</p> <p>3 A Not to my recollection.</p> <p>4 Q You were familiar with UNIX in the mid</p> <p>5 1980s, right? 14:36:18</p> <p>6 A As a user of UNIX.</p> <p>7 Q And -- by the way, are you familiar with</p> <p>8 Linux?</p> <p>9 A Only as a user.</p> <p>10 Q When did you first become familiar with 14:36:38</p> <p>11 Linux?</p> <p>12 A With Linux? I think I first heard mention</p> <p>13 of it in the late '90s.</p> <p>14 Q Did Cisco come up with the nomenclature of</p> <p>15 calling a mode "privileged," to your knowledge? 14:38:02</p> <p>16 A I don't believe -- I don't believe Cisco</p> <p>17 came up with that terminology.</p> <p>18 Q Let me turn to the current set of IOS CLI</p> <p>19 commands.</p> <p>20 I don't expect an exact number, but do you 14:38:54</p> <p>21 know approximately how many IOS CLI commands there</p> <p>22 are today?</p> <p>23 A I would have to guess. It is a -- it's a</p> <p>24 very large number.</p> <p>25 Q Can you just give me a ballpark? 14:39:15</p> <p style="text-align: right;">Page 112</p>
<p>1 bracket prompt? 14:33:02</p> <p>2 A Router name, close angle bracket.</p> <p>3 Q Right.</p> <p>4 A Yes, I chose that.</p> <p>5 Q Okay. How did you come to choose that? 14:33:09</p> <p>6 A Well, there were -- when you have multiple</p> <p>7 devices on a network, one of the first things you</p> <p>8 want to know if you're typing at something is to</p> <p>9 what you are typing at. So that -- sort of the most</p> <p>10 aesthetic choice was the -- was the name of the 14:33:51</p> <p>11 device.</p> <p>12 And the angle bracket was a nice visual</p> <p>13 way of terminating -- you know, here's where your</p> <p>14 type-in begins. Here's where the prompt ends,</p> <p>15 here's where the type-in begins. 14:34:19</p> <p>16 Q Had you ever seen the angle bracket used</p> <p>17 as a prompt in any other system?</p> <p>18 A I wasn't aware of any generally available</p> <p>19 host -- general purpose timesharing that actually</p> <p>20 that was the default, that was the prompt. 14:34:56</p> <p>21 Q I'm not sure what you mean by that.</p> <p>22 But had you ever seen any system that used</p> <p>23 a close angle bracket as a prompt?</p> <p>24 A No. TOPS-20 used an "at" sign and UNIX</p> <p>25 used a percent sign. 14:35:19</p> <p style="text-align: right;">Page 111</p>	<p>1 A I believe it's in the low thousands. 14:39:20</p> <p>2 Q Do you know if it's more or less than</p> <p>3 5,000?</p> <p>4 A No, I don't. I've not counted it. I've</p> <p>5 not -- I've not counted it, nor have I heard of 14:39:43</p> <p>6 somebody who has counted how many there are and how</p> <p>7 many variations there are in total.</p> <p>8 Q What is IOS XR?</p> <p>9 MR. NEUKOM: Objection. Asked and</p> <p>10 answered. 14:40:16</p> <p>11 THE WITNESS: IOS XR is a Cisco-developed</p> <p>12 variant of IOS for the -- for the service provider</p> <p>13 marketplace.</p> <p>14 BY MR. FERRALL:</p> <p>15 Q Does IOS XR have a different set of CLI 14:40:43</p> <p>16 commands?</p> <p>17 A It has --</p> <p>18 Q From IOS, that is.</p> <p>19 A It is substantially the same. There is</p> <p>20 functionality that exists only for a service 14:41:02</p> <p>21 provider that has commands that are not contained in</p> <p>22 the other variants of IOS.</p> <p>23 Q What is IOS XE?</p> <p>24 A That is a variant of IOS.</p> <p>25 Q What's the purpose of that variant? 14:41:27</p> <p style="text-align: right;">Page 113</p>

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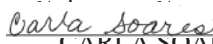
1 Q Why did you feel that way? 14:51:39	1 BY MR. FERRALL: 14:55:22
2 A Because the changes that I had in mind	2 Q In what ways does it have value for Cisco?
3 were basically minor tweaks that didn't add value.	3 MR. NEUKOM: Same objections.
4 Q Do Cisco customers invest in training to	4 THE WITNESS: It is the -- it's the look
5 become familiar with Cisco's CLI? 14:52:24	5 and feel of Cisco router software. 14:55:38
6 MR. NEUKOM: Objection. Vague, compound	6 BY MR. FERRALL:
7 and foundation.	7 Q Why is that valuable?
8 THE WITNESS: I have no reason to believe	8 MR. NEUKOM: Objection. Calls for
9 that they don't.	9 opinion, and vague.
10 BY MR. FERRALL: 14:52:41	10 THE WITNESS: It lets customers know what 14:56:11
11 Q Do you know that they do?	11 they are getting.
12 MR. NEUKOM: Same objections.	12 BY MR. FERRALL:
13 THE WITNESS: I don't have direct	13 Q Can you explain that more? How does a CLI
14 experience with customers' network operations.	14 command set let customers know what they are
15 BY MR. FERRALL: 14:52:59	15 getting? 14:56:37
16 Q Well, but you're familiar with the whole	16 A There is a -- it's a look and feel that
17 Cisco certification process, aren't you?	17 long-time customers are familiar with, are
18 A I know of it.	18 comfortable with, and it represents that this is
19 MR. NEUKOM: Objection. Vague.	19 a -- this is a Cisco product, not necessarily
20 BY MR. FERRALL: 14:53:13	20 somebody else's product. 14:57:24
21 Q What is that process? Can you tell me	21 MR. NEUKOM: Brian, whenever you think is
22 what you know about it?	22 a good time. I think we've been going about an
23 A It is a set of training and a	23 hour.
24 certification that you have understood the training	24 MR. FERRALL: Okay. Okay. We can take a
25 involved in networking. 14:53:29	25 break. 14:58:04
Page 118	Page 120
1 Q What's Cisco's role in -- strike that. 14:53:35	1 THE VIDEO OPERATOR: Going off the record, 14:58:06
2 What are the levels of certification one	2 the time is 2:58 p.m.
3 can get from that training, do you know?	3 (Recess, 2:58 p.m. - 3:24 p.m.)
4 A I do not know.	4 THE VIDEO OPERATOR: Back on the record.
5 Q Have you ever heard of the term CCIE? 14:53:51	5 The time is 3:24 p.m. 15:24:02
6 A Yes, I have.	6 BY MR. FERRALL:
7 Q What's that?	7 Q Mr. Loughheed, when did you first become
8 A I believe it's Cisco certified Internet	8 aware of DOS, D-O-S?
9 engineer. I'm not sure.	9 A I'd say whose DOS?
10 Q Do you know what Cisco's role is in 14:54:10	10 Q MS-DOS. 15:24:36
11 determining that certification for a CCIE?	11 A MS-DOS? I probably heard about it when
12 A I'm not familiar with the details of that	12 IBM announced the IBM PC.
13 program.	13 Q Do you recall that MS-DOS uses a close
14 Q Does Cisco itself provide training?	14 angle bracket as a prompt?
15 MR. NEUKOM: Objection. Vague. 14:54:35	15 A Now that you remind me, it does. 15:25:16
16 BY MR. FERRALL:	16 Q Do you think you might have been inspired
17 Q Training to learn how to use Cisco devices	17 by that prompt when you chose the close angle
18 and use the CLI?	18 bracket for Cisco's prompt?
19 A Not for customers. I don't believe it	19 A No. I was not a DOS user.
20 provides training for customers. 14:54:53	20 Q So it's just a coincidence that you and 15:25:34
21 Q Do you think that the Cisco CLI has value	21 DOS came up with the same prompt, to your knowledge?
22 to Cisco?	22 MR. NEUKOM: Objection. Asked and
23 MR. NEUKOM: Objection. As phrased, calls	23 answered.
24 for opinion. Also, vague and compound.	24 THE WITNESS: I was not a DOS user. I
25 THE WITNESS: Yes, it has value. 14:55:21	25 first -- I was not a DOS user. 15:26:06
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1 Q So in this case, there's a command, for 16:40:25	1 "IF" instead of "interface." 16:45:51
2 example, "clear ARP-cache," right?	2 A It was just an example of choice of --
3 A Yes.	3 choice of word.
4 Q In that command, is that the ARP cache	4 But under discussion was rather what was a
5 that's being cleared? 16:40:55	5 hierarchy here. And these are the -- "interface" 16:46:05
6 A I believe that command clears -- clears	6 with an argument after it is the first part of a
7 all address resolution caches. There's more than	7 hierarchy.
8 one address resolution protocol in the system, or at	8 You could draw this in a tree shape, and
9 least there was when we were a primarily	9 it would be -- the hierarchy would be very obvious.
10 multi-protocol router. 16:41:19	10 Q So is it still -- would it still be using 16:46:36
11 Q Okay. If you go to page 6, the next page,	11 your hierarchy if this command were "IF Ethernet"?
12 now, for this, "interface Ethernet," is that a	12 MR. NEUKOM: Objection. Calls for
13 hierarchy?	13 speculation, vague.
14 A It is --	14 THE WITNESS: There's many other pieces to
15 MR. NEUKOM: Objection. Calls for opinion 16:42:27	15 the -- there are many other pieces to the hierarchy. 16:47:00
16 testimony.	16 This is -- I was aiming for a hierarchical,
17 THE WITNESS: It is the leading element of	17 symmetric, aesthetically pleasing set of
18 a hierarchy.	18 configuration command expressions.
19 One of the choices that I made at Stanford	19 BY MR. FERRALL:
20 actually in introducing the "interface" command was 16:42:49	20 Q Tell me about -- what's aesthetically 16:47:28
21 that it assumed a block structure where I could say	21 pleasing about this command expression "interface
22 things like "interface Ethernet zero," and then I	22 Ethernet"?
23 could say -- I could have a bunch of -- at Stanford	23 MR. NEUKOM: Objection. Calls for opinion
24 I had a bunch of what we called interface sub	24 testimony.
25 commands that would follow on subsequent lines. 16:43:17	25 THE WITNESS: This is a command fragment. 16:47:44
Page 154	Page 156
1 I could very well have made the choice to 16:43:21	1 This is the leading part of a command. There's more 16:47:45
2 write that as, on one line, for example, "interface	2 to it than this.
3 Ethernet zero address," an IP address, a subnet	3 MR. NEUKOM: Brian, I think at this point
4 mask, and you would have a hierarchy of	4 we're coming up on an hour and a half. Do you mind
5 configuration stuff. 16:43:44	5 if we take a short break? 16:48:05
6 Going outside into Cisco, you could have	6 MR. FERRALL: Well, let me just ask one
7 "interface Ethernet zero." I could have "IP" and	7 more question.
8 then a bunch of IP keywords after that. I could	[REDACTED]
9 have "interface Ethernet zero DECnet" and have a	[REDACTED]
10 bunch of DECnet keywords underneath that. And that 16:44:00	[REDACTED]
11 would very clearly demonstrate a hierarchy.	[REDACTED]
12 I made the aesthetic choice of saying --	[REDACTED]
13 of turning the word "interface" -- which I could	[REDACTED]
14 have chosen something like "IF" or "net-in" or	[REDACTED]
15 something like that, but I chose "interface" -- I 16:44:23	[REDACTED]
16 like writing words out -- I chose as a typing	[REDACTED]
17 shorthand to say this is the front end of all -- of	[REDACTED]
18 the hierarchy for all the rest of these commands.	[REDACTED]
19 So this does -- it is a hierarchy,	[REDACTED]
20 especially in the Cisco multi-protocol world that it 16:44:47	[REDACTED]
21 evolved into.	[REDACTED]
22 BY MR. FERRALL:	[REDACTED]
23 Q So I'm trying to understand the nature of	[REDACTED]
24 your hierarchy.	[REDACTED]
25 You said, for example, you could have used 16:45:50	[REDACTED]
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<p>1 [REDACTED] [REDACTED]</p> <p>2 [REDACTED]</p> <p>3 [REDACTED]</p> <p>4 [REDACTED]</p> <p>5 [REDACTED] [REDACTED]</p> <p>6 [REDACTED]</p> <p>7 [REDACTED]</p> <p>8 [REDACTED]</p> <p>9 [REDACTED]</p> <p>10 [REDACTED] [REDACTED]</p> <p>11 [REDACTED]</p> <p>12 [REDACTED]</p> <p>13 [REDACTED]</p> <p>14 [REDACTED]</p> <p>15 [REDACTED] [REDACTED]</p> <p>16 [REDACTED]</p> <p>17 [REDACTED]</p> <p>18 [REDACTED]</p> <p>19 [REDACTED]</p> <p>20 [REDACTED]</p> <p>21 [REDACTED]</p> <p>22 [REDACTED]</p> <p>23 [REDACTED]</p> <p>24 [REDACTED]</p> <p>25 [REDACTED] [REDACTED]</p> <p style="text-align: right;">Page 158</p>	<p>1 The time is 5:13 p.m. 17:13:27</p> <p>2 (Exhibit 40 was marked for identification</p> <p>3 and is attached hereto.)</p> <p>4 BY MR. FERRALL:</p> <p>5 Q Okay. We just marked as Exhibit 40 an 17:13:32</p> <p>6 email bearing control numbers CSI-CLI-00746398. It</p> <p>7 appears to be between you and a Craig Fox, among</p> <p>8 others.</p> <p>9 And I guess my only question for you,</p> <p>10 Mr. Loughheed, is do you have any reason to believe 17:13:57</p> <p>11 that you didn't send this email that's Exhibit 40?</p> <p>12 A It looks like I sent it. I have not had a</p> <p>13 chance to read it.</p> <p>14 Q Are you on the Parser Police mailing list?</p> <p>15 MR. NEUKOM: Objection. Vague. 17:14:36</p> <p>16 THE WITNESS: At one point I was.</p> <p>17 BY MR. FERRALL:</p> <p>18 Q For what period of time were you on that</p> <p>19 mailing list?</p> <p>20 A I don't -- I don't remember a time period, 17:14:56</p> <p>21 but it has been many years since I have been on that</p> <p>22 mailing list.</p> <p>23 Q Are you on the Fellows mailing list?</p> <p>24 MR. NEUKOM: Objection. Vague.</p> <p>25 THE WITNESS: I'm on -- I've been on 17:15:32</p> <p style="text-align: right;">Page 160</p>
<p>1 [REDACTED] [REDACTED]</p> <p>2 [REDACTED]</p> <p>3 [REDACTED]</p> <p>4 [REDACTED]</p> <p>5 [REDACTED] [REDACTED]</p> <p>6 [REDACTED]</p> <p>7 [REDACTED]</p> <p>8 [REDACTED]</p> <p>9 [REDACTED]</p> <p>10 [REDACTED] [REDACTED]</p> <p>11 [REDACTED]</p> <p>12 [REDACTED]</p> <p>13 [REDACTED]</p> <p>14 [REDACTED]</p> <p>15 [REDACTED]</p> <p>16 [REDACTED]</p> <p>17 [REDACTED]</p> <p>18 I've answered the question to the best of</p> <p>19 my ability.</p> <p>20 MR. FERRALL: Okay. All right. Let's go 16:53:22</p> <p>21 off the record.</p> <p>22 THE VIDEO OPERATOR: Going off the record,</p> <p>23 the time is 4:53 p.m.</p> <p>24 (Recess, 4:53 p.m. - 5:13 p.m.)</p> <p>25 THE VIDEO OPERATOR: Back on the record. 17:07:48</p> <p style="text-align: right;">Page 159</p>	<p>1 various mailing lists that have included Cisco 17:15:33</p> <p>2 Fellows.</p> <p>3 BY MR. FERRALL:</p> <p>4 Q Can you tell me which ones those are, to</p> <p>5 the best of your knowledge? 17:15:44</p> <p>6 A To the best of my knowledge, there was</p> <p>7 a -- an older mailing list called Fellows@cisco.com.</p> <p>8 More recently there's a mailing list called</p> <p>9 DE-Fellows-Meeting-Attendees.</p> <p>10 Q And you've been on both of those? 17:16:05</p> <p>11 A Yes.</p> <p>12 Q I don't have any other questions about</p> <p>13 that.</p> <p>14 A Okay. I rather liked what I wrote.</p> <p>15 Q Tell me what a loopback is. Are you 17:16:35</p> <p>16 familiar with that term?</p> <p>17 A It's a term -- I believe it originated in</p> <p>18 electronics, certainly in pieces of hardware, where</p> <p>19 you can take the output signal of a device and put</p> <p>20 it into -- to input and see if it receives it 17:17:18</p> <p>21 correctly.</p> <p>22 It tests the internal state machine of</p> <p>23 whatever entity you're testing.</p> <p>24 Q When did you first hear it used in the</p> <p>25 networking context? 17:17:35</p> <p style="text-align: right;">Page 161</p>

<p>1 Q How did you choose the term -- the words 18:13:39</p> <p>2 "timers basic" for this function?</p> <p>3 A I don't remember where "basic" came from.</p> <p>4 But using the keyword "timers" was my -- was my</p> <p>5 introduction, was my creation. 18:14:00</p> <p>6 MR. NEUKOM: Counsel, I believe we're now</p> <p>7 beyond seven hours.</p> <p>8 MR. FERRALL: Okay. Well, I -- given</p> <p>9 Mr. Lougheed's tenure at Cisco, I thank him for his</p> <p>10 time, but I will say I think we deserve some more 18:14:22</p> <p>11 time with him.</p> <p>12 But I understand seven hours is up and</p> <p>13 you're going to say enough is enough for today I</p> <p>14 take it; is that right?</p> <p>15 MR. NEUKOM: Certainly for today for the 18:14:31</p> <p>16 sake of the witness. And we will respectfully</p> <p>17 disagree with the idea that counsel needs more than</p> <p>18 seven hours --</p> <p>19 MR. FERRALL: Okay.</p> <p>20 MR. NEUKOM: -- needs more than today. 18:14:41</p> <p>21 But we can discuss that for another day.</p> <p>22 In the meantime, I should note for the</p> <p>23 record the witness reserves the right to review the</p> <p>24 transcript and make corrections.</p> <p>25 Brian, I'm not sure I did that for 18:14:51</p> <p>Page 186</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p> <p>8 I, KIRK LOUGHEED, do hereby declare under</p> <p>9 penalty of perjury that I have read the foregoing</p> <p>10 transcript; that I have made any corrections as</p> <p>11 appear noted, in ink, initialed by me, or attached</p> <p>12 hereto; that my testimony as contained herein, as</p> <p>13 corrected, is true and correct.</p> <p>14 EXECUTED this _____ day of _____,</p> <p>15 2015, at _____,</p> <p>16 (City) (State)</p> <p>17</p> <p>18</p> <p>19 _____</p> <p>20 KIRK LOUGHEED</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p> <p>Page 188</p>
<p>1 Mr. Tjong. If you're okay with it, I'd like to just 18:14:53</p> <p>2 do a stipulation across the case that both sides</p> <p>3 have the 30-day review and errata right for all</p> <p>4 transcripts regardless whether counsel puts it on</p> <p>5 the record at the depo as a two-way street. 18:15:04</p> <p>6 MR. FERRALL: That's fine. I thought it</p> <p>7 existed as a matter of procedure anyway. So that's</p> <p>8 fine.</p> <p>9 MR. NEUKOM: I hope you're right, but glad</p> <p>10 to have the stipulation, even if it's unnecessary. 18:15:17</p> <p>11 MR. FERRALL: Okay.</p> <p>12 MR. NEUKOM: Thanks very much.</p> <p>13 THE VIDEO OPERATOR: This concludes</p> <p>14 today's videotaped deposition of Mr. Kirk Lougheed.</p> <p>15 We're off the record at 6:15 p.m. Thank you. 18:15:25</p> <p>16 (TIME NOTED: 6:15 p.m.)</p> <p>17 --o0o--</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p> <p>Page 187</p>	<p>1 I, the undersigned, a Certified Shorthand</p> <p>2 Reporter of the State of California, do hereby</p> <p>3 certify:</p> <p>4 That the foregoing proceedings were taken</p> <p>5 before me at the time and place herein set forth;</p> <p>6 that any witnesses in the foregoing proceedings,</p> <p>7 prior to testifying, were administered an oath; that</p> <p>8 a record of the proceedings was made by me using</p> <p>9 machine shorthand which was thereafter transcribed</p> <p>10 under my direction; that the foregoing transcript is</p> <p>11 a true record of the testimony given.</p> <p>12 Further, that if the foregoing pertains to</p> <p>13 the original transcript of a deposition in a Federal</p> <p>14 Case, before completion of the proceedings, review</p> <p>15 of the transcript [X] was [] was not requested.</p> <p>16 I further certify I am neither financially</p> <p>17 interested in the action nor a relative or employee</p> <p>18 of any attorney or any party to this action.</p> <p>19 IN WITNESS WHEREOF, I have this date</p> <p>20 subscribed my name.</p> <p>21</p> <p>22 Dated: 11/25/2015</p> <p>23</p> <p>24 </p> <p>25 CARLA SOARES CSR No. 5908</p> <p>Page 189</p>